



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,272	09/26/2003	Uwe D. Schaible	PAT 52154-2	4940
26123	7590	02/23/2005	EXAMINER	
BORDEN LADNER GERVAIS LLP WORLD EXCHANGE PLAZA 100 QUEEN STREET SUITE 1100 OTTAWA, ON K1P 1J9 CANADA			SOUW, BERNARD E	
			ART UNIT	PAPER NUMBER
			2881	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,272

Applicant(s)

SCHAIBLE ET AL.

Examiner

Bernard E Souw

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/12/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Amendment

1. The Amendment filed on 02/02/2005 has been entered. The present Office Action is made with all the suggested amendments being fully considered.

No claim has been amended, cancelled or added.

Pending in this office action are claims 1-27

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 1 1-14 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baarman et al. USPAT 6,436,299) in view of Wekhof (USPAT 5,144,146).

Baarman et al. teach an ultraviolet (UV) fluid treatment system shown in Fig.1 and Figs.2A-C, comprising a fluid treatment zone having a fluid inlet (32) and a fluid outlet (34), a UV emitter (60) mounted in the fluid treatment zone, as recited in Col.5/ll.45-65 and Col.6/ll.11-49, a sensor unit disposed within the fluid treatment zone as recited in Col.2/ll.59-65, the sensor unit including at least fluid flow sensing means (104) to sense fluid flow within the fluid treatment zone and UV sensing means to sense

Art Unit: 2881

UV light levels, an intelligent driver (102) for receiving a fluid flow indication and a UV light level indication from the sensor unit, and for controlling operation of the UV emitter in response to at least one of the fluid flow indication and the UV light level indication, and an indicator (106) in communication with the intelligent driver for providing a user with information related to operation of the fluid treatment system, as recited in Col .6/II. 66-67 and Col.7/II.1-28.

However, the UV light source (60) in Baarman's fluid treatment system is located outside of the fluid. Wekhof teaches to place the UV light source (12) within the fluid inside the fluid chamber 10, as shown in Fig.1 and expressly recited in Col.2/II.64-68.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Baarman's fluid treatment system by putting the ultraviolet source inside the chamber, i.e., within the fluid itself, as taught by Wekhof, in order to achieve a higher efficacy of UV treatment owing to an absence of UV absorption by the separating walls between the fluid and the UV light source.

► Regarding claim 2, Baarman's UV emitter (60) shown in Fig.2A-C, or (300, 302) shown in Figs.5 and 6, is a mercury vapor lamp, as implicated in Col.15/II.56-60.

► Regarding claim 3, Baarman's sensor unit(s) 104, 108, 110, 112 and 114 are self-contained within a housing 12 shown in Fig.1, which also shows a lens 28 accommodating a display 106 shown in Fig.3, as recited in Col.5/II.46-65 and Col.7/II.16-28. .

► Regarding claim 4, Baarman's sensor unit(s) 104, 108, 110, 112 and 114 is (are) remote from the UV emitter, as shown in Fig.3.

Art Unit: 2881

► Regarding claims 11, 12, 21, 23 and 26, Baarman's intelligent driver (102+14), as shown in Fig.3 and recited in Col .6/11.50-65, includes a lamp driver circuit (14) under control of a ballast microprocessor (102, 103, 122), as recited in Col.6/11.57-65 and Col.7/line 5, wherein the ballast microprocessor is re-programmable, the latter being an inherent property of a microprocessor.

► Claim 13 recites a plurality of sensing means, instead of a single sensing unit as recited in claim 11 . Although none of the cited references disclose a plurality of ribs, the court held that mere duplication of pads has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

► Regarding claims 14 and 22, Baarman's sensor unit(s) includes a fluid flow indication (104), as recited in Col.6/11 .66-67 & Col .7/11.16-19, and a UV light level indication through UV light RF identification transponder 126, as recited in Col.7/11.6-15.

► Regarding claim 24, Baarman's intelligent driver (102+14) shown in Fig.3 includes an alarm (1. 16) for indicating system malfunction to a user, as recited in Col.7/11.54-63.

► Regarding claim 25, Baarman's system includes a safety interlock (190) for detecting improper connection of the UV emitter, as shown in Fig.5 and recited in Col.10/11.1 5-52.

► Regarding claim 27, Baarman's indicator includes a display (106) shown in Fig.3 for displaying at east one of text and graphics, as recited in Col.7/11.19-24.

Art Unit: 2881

3. Claims 5, 7, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baarman in view of Wekhof, and further in view of Cohen (USPAT 6,317,051).

Baarman as modified by Wekhof teaches all the limitations of claims 5, 7, 15 and as previously applied to claims 1-4, 1 1-14 and 21-27, except the recitation of sound/vibration sensing means. Cohen shows in Fig.1 the use of a sound/vibration detector (16) being connected to a controller system (22), as recited in Col.2/II.48-52, Col.3/II.6-14 and Col.4/II.2-18, the sound/vibration sensor being typically a microphone, as expressly recited in Col.4/II.2-3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adopt Cohen's teaching of adding a microphone or other vibration/sound detector/sensor as a second flow detection device to Baarman's fluid treatment system as previously modified by Wekhof, in order to detect any possible leak in the flow system, as taught by Cohen in Col.4/II.5-18.

4. Claims 6, 8-10, 16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baarman in view of Wekhof and Cohen, and further in view of general skill in the art.

Baarman as modified by Wekhof and Cohen teaches all the limitations of claims 6, 8-10, 16 and 18-20, as previously applied to claims 5, 7, 15 and 17, except the recitation of sound/vibration generation means.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a sound/vibration generation means to Baarman's fluid treatment system as already modified by Wekhof and Cohen, in order to test the sound/vibration sensing means for proper operation, since the necessity of such a test is well known in the art, whereas the use of sound/vibration generation means for self-diagnosis is also within skill in the art.

Final Rejection

5. The above rejection is word-by-word a repeat of the previous office action dated 11/02/2004. No new ground of rejection is here presented. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Applicant's Arguments

6. The following is the examiner's response to Applicant's arguments:

► Regarding applicant's argument based on Baarman's Col.2/ll.59-65 quoted on page 2 of Applicant's 02/02/05 remarks, that "*nowhere is the location of any of the flow sensor ... said to be within the fluid treatment zone*", it is to be noted that if there is no indication of the contrary (i.e., that the flow sensor is disposed outside the fluid treatment zone), there is no justification for one of ordinary skill in the art to presume that Baarman's flow sensor would not be located within the fluid treatment zone, simply because a flow sensor is conventionally disposed within, i.e., inside, the fluid flow being measured. This official notice is supported by Malson (USPAT 4,876,014), reciting in Col.8/ll.58-61 a flow control and measuring device (not shown) being present within the casing 80 shown in Fig.6, i.e., the fluid treatment zone. Further support is given by Kuennen et al. (USPAT 5,698,091) reciting in Col.2/ll.59-62 the use of a "*filter monitor*", which is inherently understood in the art as being disposed in the flowing fluid.

► Regarding Applicant's further argument on pg.04, reciting that sensor 440 shown in Baarman's Fig.9 is an Allegro sensor 3134, it is to be firstly noted that nowhere in the submitted Affidavit about sensor 3134 is it recited that the Hall-effect sensor is to be placed only outside the water to be treated. As generally known in the art, such a sensor may be also made waterproof, and hence, submersible. Secondly, sensor 440 in Baarman's Fig.9 (which is identified as being an Allegro 3134 sensor) is only one particular embodiment among many other embodiments in Baarman's disclosure. A more general embodiment is shown in Fig.3, as recited in Col.6/ll.66-67 and Col.7/ll.16-

19, in which flow sensor 104 is not specified as, and hence, has no relation whatsoever with, any Allegro 3134. Being a conventional flow sensor, sensor 104 in Baarman's Fig.3 is to be understood as waterproof and submersible, as flow sensors generally should be, which is already recited by Malson and Kuennen et al. above.

► Applicant's argument on page 05, that, it would be improper to combine a reference directed to "*personal or small enterprise water purification*" (Baarman's) with a reference directed to "*industrial or city-water purification*" (Wekhof's), is unpersuasive for at least two different reasons:

(a) It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

(b) The disputed limitation of "*a fluid treatment system for small enterprise and consumer use*" in the preamble of claim 21 is not given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a *structure* (claim 21 is an apparatus claim!) and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *In re Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

► Applicant's further argument on page 05, that Baarman's and Wekhof's are "*not in the same field and should not be combined*" is unpersuasive, since it has been held that the determination that a reference is from a nonanalogous art is twofold. First, we

decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. *In re Wood*, 202 USPQ 171, 174. In this case, all cited prior arts are dealing with devices and/or methods for water purification using UV irradiation, which is reasonably pertinent to the particular problem in Applicant's invention.

► Applicant's further argument on page 05 regarding Wekhof's use of a pulsed source being allegedly not combinable with Baarman's is unpersuasive, since a stationary UV lamp may as well be used in Wekhof's invention. Furthermore, it is nowhere recited in Applicant's claims that Applicant's invention is restricted only to stationary or non-pulsed light sources. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

► Applicant's argument on page 06 against the examiner's suggestion of using a sound/vibration means/source to test the proper operational condition of a vibration sensor is unpersuasive for at least three compelling reasons: (a) Such a test is conventionally and routinely done in research and manufacturing laboratories. (b) What else would be used for testing a vibration sensor, if not by means of a vibration-generating device? (c) In such a test, placing a vibration source/means outside the fluid would be not within skill in the art, meaning that no person of ordinary skill in the art would ever place a vibration source outside the fluid to be monitored. Therefore, the

previous claim rejection based on a combination of Baarman, Wekhof and Cohen is proper.

Relevant Prior Art

7. This prior art made of record and not relied upon is considered pertinent to applicant's disclosure: USPAT # 6,200,466, issued on 03/13/2001 to Bender, is found to claim the same subject matter of the disclosure as Applicant's invention, and therefore could have been used for rejecting most of the present claims in place of Baarman's.

Communications

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

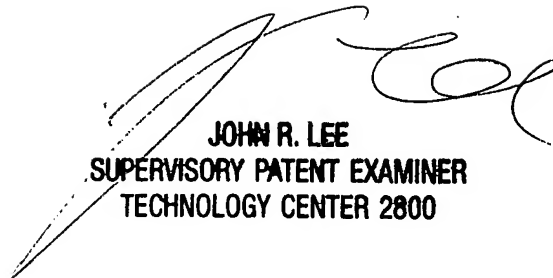
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

Art Unit: 2881

bes

February 10, 2005



JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800